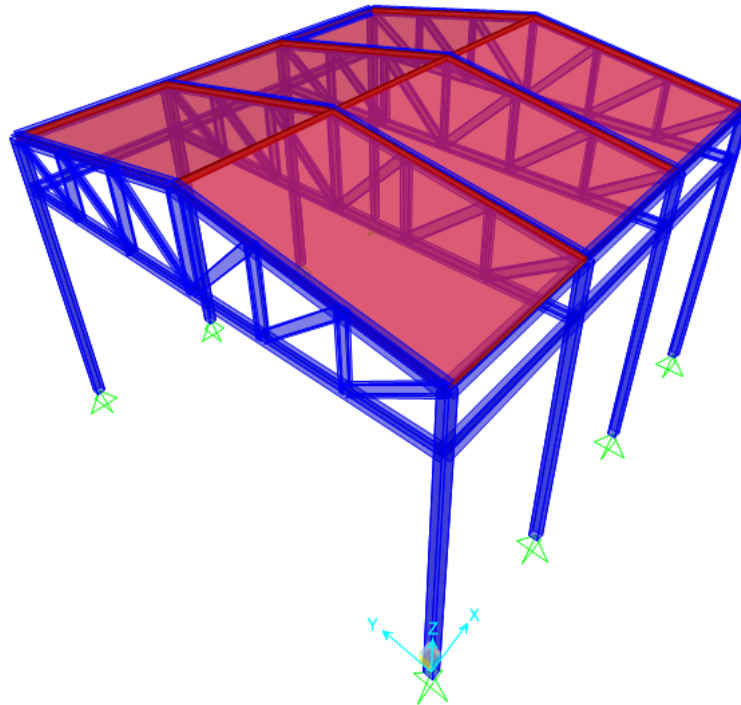


CIVL 4122 Homework #31

Name: _____

Follow the step-by-step instructions for building a SAP2000 model of a 1-bay by 3-bay industrial building - [video](#) ([pdf](#)). Each step of the model creation process is identified, and various model construction techniques are introduced.

At the end of the tutorial, you will have built the model shown in Figure 1.



The tutorial project is a 1-bay by 3-bay industrial building. The open bay has a dimension of 36 feet, while the three bays in the longitudinal direction are each 12 feet wide. The concrete roof is supported by trusses in the transverse direction, which frame into tube columns pinned at the base.

The trusses are constructed of W shapes, while the roof sections are a concrete slab 5 inches thick. The columns are HSS 8x8x3/8 sections. The building is analyzed for static loads only, and the trusses are loaded at their panel points with a Dead Load = 20 kips, while the roof is loaded with a Live Load = 30 pounds per square foot (psf) and a Wind Load = 15 psf on the windward side and -6 psf on the leeward side.